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ABSTRACT

This document is intended as a guide to help employers, training providers, and others develop effective partnerships with leading-edge community colleges. The document begins with an overview of the strategies used by four effective training partnership initiatives involving the following corporations and community colleges: Sequins, International, and LaGuardia Community College (New York); Daimler-Chrysler and Macomb Community College (Georgia); Intel and Mission College (California); and Boeing and Shoreline Community College (Washington). In the remaining 6 sections of the guide, the following issues that are likely to be raised by employers who are considering using community colleges as training providers are addressed by drawing upon the experiences of the 4 partnerships: (1) understanding the economic rationale for investing in workers; (2) choosing the appropriate community college to provide training; (3) structuring the partnership; (4) developing and delivering the curriculum; (5) determining training costs and formulating a budget; and (6) assessing partnerships. The guide's conclusion presents and discusses lessons learned, including the following: (1) employers should seek community colleges that combine capacity, area expertise, and flexibility; (2) employers and community colleges must define their roles clearly; (3) partnerships should incorporate extensive curriculum planning; and (4) the curriculum, program delivery, and teaching should reflect the workplace. (MN)

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Improving worker

skills through

employer-

community college

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We're education...
you're semiconductors

David Gruber

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Gary Sivertson, Dave Yulans, C. Johnson, Cindy Campbell and Lawrence Gladstone took time from their corporate and professional responsibilities to describe how they and their colleagues approached development and operation of partnerships from a corporate perspective.

Julian Alssid contributed his expertise, research and reporting skills, broadening the scope and comprehensiveness of the work presented here. Yet again, Natalie Jaffe's sharply honed editing skills helped to clarify and refine the text. Sheila Maguire and Mark Elliott played a critical role in shaping the report throughout; sharing their wide-ranging experience, questioning assumptions, and offering sure-handed guidance and direction.

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As Alan Greenspan recently testified, sustaining today's growing economy will require finding some way to ensure that everyone—both current and potential workers—gets the training they need to keep pace with rapidly changing technology. While much national attention has focused on ways to include those outside the workforce in the economic boom, many of the same issues apply to those on the inside. To remain competitive in today's economy, companies need to adopt new technologies and train current workers to use them.

This, in turn, means that companies will need to devote greater resources to training. Some of this training will be provided by the company itself. Yet, in many cases—where training is large-scale, complex, technologically advanced or can simply be completed more cheaply elsewhere—companies will need to create an effective partnership with an outside provider—a private training organization, nonprofit or public institution.

It is likely that many of these new training partnerships will be formed with community colleges. Once largely offering preparation for four-year colleges, community colleges have increasingly become training institutions in their own right—in fact, the largest local delivery system for training in the United States. Formerly academic campuses have seen vocational enrollments double in the last few years and contract training become a major revenue source. New community colleges have been created with the primary aim of serving industry. For some states, community and technical colleges, with their capacity for large-scale advanced training, have become economic development tools to lure major employers.

Community colleges have also become a major resource for employers seeking to upgrade the skills of current workers. From small manufacturers like Sequins International in Queens, New York, to industry leaders like Boeing, Intel and Daimler-Chrysler, community colleges are seen by a number of employers as the provider of choice for training, ranging from teaching a single computer program to consolidating all the work tasks in a large factory.

Of course, for all their success as training institutions, community colleges vary widely in their ability and interest in performing the role of corporate trainer. Many community colleges continue to view themselves primarily as academic institutions—"junior colleges" to prepare students for transfer to four-year institutions. These colleges may disdain the training role or perform it in only a very limited way. Other institutions have accepted or embraced a training role, but have yet to develop the capacity necessary to meet large, diverse or advanced training needs.

Yet, some community colleges have emerged as "stars"—institutions with the capacity, resources, flexibility and interest to develop effective training partnerships with business. As corporate spending for training grows, we believe employers will need to seek out these leading-edge institutions to meet their own expanding training needs.

This paper is intended as a guide—for employers, training providers and others—to developing effective partnerships with leading-edge community colleges. It recognizes that corporations are large and growing training consumers, with the potential, at least, to shape the way community colleges respond to their needs. It also recognizes that planning, developing and operating a training program involving two partners is a difficult proposition, and that

seemingly simple training questions—who provides it, where it is delivered, how it is delivered, how much it costs—do not seem to have correspondingly simple answers.

While there is, of course, no one model for building a successful partnership, this paper highlights some of the best practices in developing, planning and operating community college training partnerships by reviewing the strategies employed by four effective training initiatives:

Sequins, International/LaGuardia Community College

With the aim of improving the competitiveness of a relatively small manufacturer, this partnership assists a Queens, New York sequins manufacturer to implement a quality management program. Designed to teach more efficient production techniques to all 250 employees, the ongoing Quality Manufacturing program began in 1996.

LaGuardia management training provides strategic assistance to Sequins workers in areas including production planning and control, strategic decision-making, using a computer database, benchmarking, costing, process control, team development, activity-based accounting and ergonomic training. Training has been delivered to workers over the course of three years. In addition to the technical assistance provided to Sequins workers, LaGuardia has also enrolled participants in its extensive English as a Second Language (ESL) program.

Daimler-Chrysler/Macomb Community College

A large-scale partnership, this training program for auto workers reflects continuing modernization in the auto industry. Working with both company and union representatives, Macomb is providing extensive retraining to the workers at Chrysler's Jefferson North Macomb County, Michigan Assembly plant, consolidating 23 traditional skills/trades classifications into eight. Training, begun in 1990, initially focused on 350 workers, and has continued to serve new employees.

The Chrysler-Macomb partnership provides a broad range of skills training at both basic and advanced levels in professional areas including electrician, toolmaker, pipefitter, millwright, machine repair, mechanic-gas and electric jitney, carpenter/painter and energy center operator. Each of the professional areas encompasses seven classes per trade. To fully ready workers for meeting new employment classifications, basic and advanced training includes 69 individual courses ranging from math and computer drafting to advanced hydraulics, computerized numerical control and mainframe computer network applications.

Intel/Mission College

This partnership provides postsecondary training to Intel employees through an on-site college campus in Santa Clara, California. Recognizing that many employees hired during the company's early days now lack the skills needed for a more competitive

environment, the Adxpress program, which serves approximately 100 to 150 students at any given time, is intended to lead to an AA degree and other certification now required for many Intel jobs. Designed to provide all the skills needed for a degree, the program begins with pre-enrollment assessment in English and math and includes English fundamentals and effective writing, arithmetic functions, elementary algebra, chemistry, macroeconomics, technical writing, physics, and even courses such as music.

The Intel program is also intended to ready participants to move into training in the semi-conductor manufacturing program. More advanced courses offered to Intel workers include digital principles, introduction to semiconductor manufacturing, electromechanical systems, robotics and statistical process control.

Boeing/Shoreline Community College

This partnership to train Boeing workers in the use of a specific manufacturing software program operates in Seattle, Washington. Emblematic of continuing advances in manufacturing and expanding use of computerized production techniques, Shoreline's Smart CAM training enrolls 250 workers in on-site training. The Smart CAM courses, less extensive than the others profiled, include training and competency testing in all aspects of using the program software and understanding how it relates to the manufacturing process.

Drawing on the experience of these four partnerships, this paper focuses on the key issues and questions likely to be raised by employers in considering community colleges as training providers. These include:

- Economic rationale: Why choose community colleges over other training providers?
- Choosing the appropriate community college.
- Structuring the partnership.
- Developing and delivering curriculum.
- Budget.
- Assessment.

This paper concludes with lessons learned from the four programs and recommendations based on their experiences.

Economic rationale: Why invest in workers?

The choice of a community college as a training provider has its roots in a company's larger decision to pursue additional training and education for its current workforce. When asked why they made this decision to invest, staff from each of the companies interviewed spoke of the economy and its recent dramatic changes.

Underlying the establishment of each of the partnerships we looked at is some combination of higher levels of competition, rapidly advancing technology and a tighter labor market—conditions that translate into a need for more training at reasonable cost. This goal, in one form or another, is at the center of each company's training program and in its choice of a community college as a training provider.

Intel, a rapidly growing industry leader, has seen the pace of technological change advance faster than the skills of its original workforce. As one company representative noted, in those early days, the company would "hire anyone" regardless of degree or educational level. A number of these early hires, now in jobs that have a threshold standard of an AA degree (or higher), may lack both the academic credentials and needed English, math, communications, SCANS and management skills to function effectively in a changed environment. To maintain its competitiveness, the company sees the need to provide both basic and applied education for these workers, and to encourage the active pursuit of an AA degree for anyone who does not have one in designated job levels.

For **Chrysler**, technological change required an ambitious makeover of an entire factory model—from "low-tech to high-tech," as one involved staffer put it. One outcome of the Modern Operating Agreement (MOA) between the UAW and Chrysler, was that Chrysler's new Jefferson plant consolidated 23 traditional, highly defined classified job titles into eight—creating an immediate need to retrain a senior workforce with an average age of 54. In addition to transforming the jobs of every worker, the change required many to learn new skills such as computers and PLC robotics.

For **Boeing**, another industry giant, training needs have also been driven by advancing technology, and the concomitant need to train workers to operate new computerized machining equipment at a reasonable cost. As with most manufacturers, Boeing faces a continuing challenge to find cost-effective means to keep its workforce current with new equipment and manufacturing techniques.

The pressures of meeting the dual requirements of high quality and low cost are, if anything, more intense at small manufacturers such as **Sequins**, which confronts a highly competitive environment without the resources of a large or even mid-size corporate base. Sequins is competing with Chinese and Indian firms that have much lower labor costs. The firm needs to lower costs and raise product quality to meet customer expectations and remain viable.

Why choose a community college?

For each of these employers, the economic factors described here led to a choice of a community college over other options ranging from training companies to proprietary schools to in-house training. How did they come to a decision? For some of the employers profiled here, there was no real choice: training requirements were of a scope or complexity that no other provider could meet or meet easily.

For these employers, with large-scale and intensive training requirements, community colleges have the potential to offer, in one place, a broad range of existing or easily adapted courses; access to a pool of faculty expertise; academic credit for training; and a continuing educational resource for a company and its employees—all attributes not readily duplicated by other providers. As the experience of these companies makes clear, some community colleges are well-positioned to meet ambitious training needs: particularly those that require comprehensive, long-term or complex training services.

For more narrow or limited training, however, there is greater competition—from in-house providers, training firms and manufacturers. For two companies profiled here, however, community colleges are competitive on services that other providers also offer. These companies cite high flexibility and low cost as reasons to use a community college rather than a competitor organization.

In general, five key reasons for choosing community colleges emerged from discussions with these companies:

1 ***Continuing Connection***

As a stable and accessible presence in the community, community colleges can provide continuing educational and training benefits to workers.

Several employers cited this continuing access to training, beyond the specific project studied, as an important consideration in developing a partnership with community colleges. At a time when employers increasingly see the need for continual upgrade training to keep pace with technology, creating personal connections for employees with community colleges is naturally viewed as an important outgrowth of a training relationship. For Intel, of course, creating this connection is at the center of the training mission. Other employers also see fostering ongoing individual connections to colleges as a key long-term benefit of a more limited training program. Of course, part of this benefit derives from the fact that community colleges, unlike private providers, will always be there, "stable and dependable," as one Boeing staffer noted, and thus accessible to employees who want to continue their training.

The sense of community colleges as an essential—and cost-effective—resource for employees beyond the immediate training program is shared by most of the employers. At Sequins, the CEO views LaGuardia Community College as a rich and underutilized community educational opportunity that could help his largely low-skilled, non-English speaking workers in a broad array of areas from language skills to personal development to improved technical skills.

2 ***Scope and Capacity***

Few other providers can match the breadth of training offered at some community colleges. With an established presence in the community, a ready pool of instructional staff, dedicated funding and the ability to offer scores of courses, community colleges provide a level of capacity for large-scale or long-term training that is difficult for other providers to duplicate. Chrysler, for example, with a mandate to provide extensive retraining for 350 workers over a period of several years (and continuing training for new workers), "never considered" other vendors. Charged with providing over 50 classes in eight separate consolidated work areas, Chrysler's training partner, Macomb Community College, has been able to draw on related curriculum, assemble needed instructors and provide required class and lab space. Faced with demands of this magnitude, community colleges are, as one Chrysler staffer noted, "the natural" training provider. Few organizations can compete on this scale.

While the other employers studied did not reach the same scope in their training, they too have drawn on the resources of community colleges to create large-scale long-term training. Intel's on-site college campus, for example, required Mission Community College to provide instruction and curriculum in seven subject areas at Intel, while also offering access to a much broader range of advanced and applied training at its nearby campus.

3 *Academic Credit*

Postsecondary institutions in general, and community colleges in particular, have a significant advantage over most other vendors in that they can offer a full range of academic services—a degree and/or a wide spectrum of academically certified programs and individual classes earning academic credit. Perhaps the most obvious reason to choose a community college is the kind of academic accreditation that most vendors or in-house providers cannot offer. For Intel, for example, an Associates degree has become a required credential for many job titles. Intel's goal in contracting with a community college is essentially to establish a college on-site as a way to provide basic skills training and credentials to its employees. Boeing, too, sees the potential provision of credit for training as an additional reason to seek a community college as its primary training provider (although Boeing students did not in fact receive credit for the training provided).

4 *Complementary Services*

Community colleges provide a range of services beyond the usual focus of a training project, including counseling, evaluation and testing. For several employers, these ancillary services were an additional benefit of their college partnership, with counseling in particular seen as a means to help students adjust to training and benefit from the educational opportunities available.

5 *Cost*

For some kinds of training, community colleges can provide low-cost services. For two of the companies profiled, cost has been the determining factor in choosing the community college over competing providers, where community college advantages of scale and capacity are not a major factor. For Boeing, for example, Shoreline Community College has been able to significantly undercut industry providers in offering its training on adapting a specific piece of equipment. This advantage in cost over private providers is, for Boeing, enhanced by the dependability and stability of the community college.

Similarly, LaGuardia has provided its quality management training at a large discount, compared with the private management consulting firm used previously. Interestingly, lower costs in both these cases do not result directly from any public sector subsidies (beyond those that provide the foundation for public education) but are based on the prevailing fee structure at the community college.

Unlike the other factors, cost is not an inherent advantage of community college training, and may, in fact, be seen as an issue when colleges are chosen for other reasons. For Intel and Chrysler, for which the community colleges are the logical, if not the only provider, cost has been less of a factor in selecting a training provider. For Intel, in fact, community colleges are seen as less competitive and less flexible in the cost arena than are other providers. Intel typically requires its contractors to reduce

costs from year to year. Due to state-fixed charges for college credit, this has not been possible in the on-site college project—much to Intel's chagrin. The unique nature of Mission's services, however, precludes any other provider.

Choosing a community college provider

Once companies recognize that their training needs are best fulfilled by community colleges, how do they choose a specific college as the training provider?

The companies studied pursued a variety of means to link their training needs to a community college provider. Two of the companies chose an RFP: a formal request for proposals that looked at factors like logistics, pricing, facilities and services. The others selected providers based on more informal contacts or a prior relationship. In all cases however, selection (and the ongoing relationship) depended on a sometimes extensive series of meetings at which the structure and fabric of the partnership were negotiated. For the larger partnerships, an established planning group worked over a period of months to fully define the training program.

While there is no single model, the experience of these employers suggests a basic list of objectives to be considered in selecting a particular community college:

- Faculty and academic capacity;
- Flexibility in delivering training;
- Ability to deliver other needed services and supports;
- Prior experience in the training area;
- Prior contacts; and
- Cost.

Beyond the basics, specific process and selection requirements will naturally vary across partnerships.

Employers with extensive training needs will develop an elaborate bid process. Chrysler, recognizing from the outset that it needed the scale of a community college to fulfill its complex and broad-ranging training requirements, put together an extended RFP/bid process that served as the basis for discussion with three community colleges. The Chrysler process began with laying out the basics of the training need—by far the largest and most comprehensive of the partnerships studied. To retrain all the workers at its Jefferson plant, Chrysler required over 50 separate classes across eight different professional fields scheduled over a three-year period. Moreover, classes needed to be offered within a relatively tight time schedule—7:00a.m. to 3:00p.m.—requiring the college to have significant resources in terms of both available faculty and space.

To familiarize the colleges with the company's training needs, Chrysler union and management representatives conducted several meetings with each college. The ultimate choice of Macomb was based on logistics, pricing and facilities. Because of its pool of faculty and experience in offering similar courses, Macomb had the broadest spectrum of training available—it "could do all of it," and at a reasonable price. For Chrysler, however, selection of a provider was only the first step in a process that was still in a very formative stage. As one college staff person noted, even after initial selection, Chrysler's objectives were still vague. For its part, Macomb, while it had experience in the required fields, did not actually offer many of the needed courses. The ultimate shape of the training program was forged over a six-month planning period featuring frequent meetings between Chrysler union and management representatives and Macomb staff.

The same pattern of a formal RFP followed by extensive negotiation characterized the other large-scale partnership, Intel and Mission College. Intel's RFP focused on cost, capacity, flexibility and services. Intel specifically looked for:

- Capacity to provide a pool of faculty that could deliver literacy, math, science and communication courses;
- Flexibility as to the time and place classes could be delivered;
- Services including counseling and assessment;
- Prior partnership history with Intel;
- Ability and willingness of the community college to assume complete responsibility for administration, including enrollment, continuing operation and counseling; and
- Credit for classes offered.

The choice of Mission among the three community colleges that responded was based on these factors, its experience in offering the "corporate college" model to other employers and on a prior training relationship. Unlike Chrysler, Mission offered many, if not all the courses required by Intel. However, because the program was to be offered on the Intel campus and designed to meet the company's specific needs, creating the partnership was not simply a matter of adding new sections of existing courses. As with Chrysler, an advisory council comprised of Intel and Mission staff continue to shape the program model.

Boeing's requirements, for a much smaller program, reflected, if in miniature, the basic elements of other training frameworks. Before finalizing its decision to work with Shoreline, Boeing asked for:

- Faculty who could assess needs and develop and deliver the curriculum;
- Delivery adapted to Boeing time and place needs;
- Connection to other Shoreline courses; and

- Credit for classes offered (ultimately not granted for cost reasons—see below).

For Sequins, the partnership resulted from a seminar sponsored by LaGuardia College on quality management implementation in small companies. Sequins management, interested in introducing the training to the company, agreed to contract with LaGuardia as a training provider. At Boeing, the process was similarly informal, with Shoreline's selection based primarily on capacity and prior relationship.

One issue in choosing community colleges is geography and designated "turf." In some cases, the most appropriate community college to meet the training need is not the closest to the employer. Because many community colleges operate within designated districts, crossing lines to seek another community college provider becomes something of a political concern. This is hardly an insurmountable problem; companies are generally free to work with any community college they choose, and two of the partnerships profiled here were able to overcome the geography issue. Nevertheless, this could be a concern in some community college partnership decisions.

Structuring the relationship: roles and responsibilities

"We're education…you're semiconductors."

Selection of a provider, of course, is just the first step in developing a training program. As discussed earlier, much of the critical early work in developing an effective program lies in defining how the employer and community college will allocate planning and implementing a complex training program. Which partner is responsible for program design? How do partners divide responsibility for program operation? How are issues that arise during the partnership resolved?

In some of the partnerships, this division of responsibilities is complex, due largely to the scope of the effort. For Chrysler's initial wholesale factory retraining project, the partners had to plan and develop curricula covering two levels of training, create 402 class sections, establish guidelines, orient employees, find faculty, find space, monitor outcomes and deal with inevitable conflicts. The Boeing partnership is much smaller, but still has required Boeing and Shoreline to develop and operate a training program for 250 employees working on three different shifts.

Regardless of size, however, while each partnership has handled these concerns somewhat differently, all have pursued a similar organizational framework. This strategy combines a clearly defined division of responsibilities between college and employer, with a joint advisory group to govern the partnership and resolve difficult issues.

The basic operating principle for all the partnerships studied is probably best expressed by a Mission College administrator describing how Mission and Intel have divided their respective responsibilities: "We're education…you're semiconductors."

While somewhat simplistic, this formula reflects the fundamental line of demarcation underlying the partnerships. On one side of the line is the college faculty and staff charged with developing, designing and operating the educational program. On the other is the employer, often in consultation with union representatives, responsible for internal management and review of plans and progress. Typically, this seemingly sharp divide is bridged by some

form of joint advisory committee that reviews plans, formulates policy and resolves issues.

In at least three of the partnerships studied, it is this committee that has given shape to the partnership through modifying the plans and procedures initially proposed by the community college, and infusing the training model with the culture and practice of the workplace. Committees have included key employer and union representatives who devote considerable time to program planning and continue to meet regularly throughout the period of operation. In the early stages particularly, this planning or advisory group has been the mechanism for program design and development.

Four key steps

To structure and organize the training initiatives, most partnerships have followed a four-step process:

Step 1:
Employer lays out general training objectives, scope, outcomes and budget.

Step 2:
Community college responds with a model defining proposed classes, faculty and logistics.

Step 3:
Advisory committee negotiates and agrees on the training model.

Step 4:
Advisory committee provides implementation, continued oversight and recommends any necessary modifications through an advisory committee.

Across the partnerships, this pattern has led to a similar division of roles and responsibilities:

Employer role

- **Develop training plan.** Employers need to develop an internal consensus on the objective, scope and direction of training. In some projects, this may require involving management, supervisors and union representatives in a series of meetings to develop agreements. In at least one of the projects studied, management has noted that insufficient attention was paid to this step prior to the start of training.
- **Set formal training objectives.** Not surprisingly, these partnerships had their genesis in training needs evident to each employer. In approaching community colleges, the first, and perhaps most important, employer responsibility is to define, at least in broad terms, the training required, and to set training objectives. In the partnerships studied, this training outline included the kinds of training needed; the number to be trained, the location of training, the duration, outcomes and the ancillary services required.

One variant of this model, seen in the Sequins example, occurs when the college offers a specific kind of training—such as quality management training—and the employer responds, seeing a chance to meet a clear need. As with the other partnerships, however, the training program as delivered is modified as a result of a close collaboration between the college and employer.

- **Set budget.** Employers take final responsibility for budgeting, of course, but approach this role differently. In two of the partnerships studied, employers began with a set budget figure, which provided a foundation for program design. In the two other partnerships, the community college first proposed a budget, which was accepted by the employer. In most cases, as above, budgeting is a continuing process.
- **Review training model.** One of the most important employer roles is to provide continuing guidance to the community college as the training design is developed. Across the partnerships, employer roles have included participation in areas like needs assessment, course selection, approval of proposed faculty, testing needs, and logistics and scheduling.
- **Recruit participants.** Employers are responsible for setting up a recruitment mechanism, including developing standards and policies for program participation, selection and program outreach. This effort includes establishing formal guidelines as well as developing written materials outlining program operations. Operational decisions may also involve a cross-section of the company. Supervisors and others may need to be involved in recommending recruits, in approving company training practices and monitoring outcomes. In some of the partnerships studied, costs of participation are billed to supervisory budgets rather than to a central training account, leading to continuing supervisor involvement in training efforts.
- **Review operations.** Employers play a continuing role in reviewing training implementation, monitoring outcomes and modifying program design. In both the Chrysler and Intel partnerships, employer advisory committees have reviewed individual class experiences, resolving such issues as employee complaints and problems with faculty.

Achieving these objectives requires a significant time commitment. Chrysler management and union representatives, for example, reported that they worked nearly full time for a year to develop the training program and have been on site nearly every day. In all the partnerships, staff from both employer and college agree that an extensive time commitment, particularly during the planning period, is necessary to make the program work.

Community college role

- **Develop training model.** Based on the objectives laid out by the partner employer, community colleges have taken responsibility for developing or modifying curriculum and presenting a detailed class plan to employers. This can be a lengthy process and often requires a good deal of interaction between the college and the employer's advisory committee.
- **Select faculty pool.** Based on articulated needs of the employer, community colleges select qualified faculty who can also deliver courses at the time and place chosen. In large partnerships, such as the Chrysler-Macomb program, which have required that colleges develop a number of new courses taught during a limited time window, this has proved to be a significant challenge. Matching faculty to employer culture and needs also has proved to be an important, and at times difficult, part of this responsibility.
- **Define logistics.** Based on the framework agreed to by the partners, community colleges are responsible for establishing and supporting a schedule of classes that fit the needs of potential trainees. This, too, can be a difficult task, particularly when training is conducted at the community college. In a partnership such as that between Macomb and Chrysler, for example, training segments for hundreds of workers have had to be scheduled for a seven-week period, with training delivered in the space of a designated seven-and-one-half-hour period each day.
- **Provide ancillary services.** Some partnerships, like that between Intel and Mission, call for services beyond classroom training, like counseling, testing and evaluation, and links to other college courses and services. This kind of employer need requires colleges to address issues of staffing, space and access beyond the core training model.
- **Modify budget.** Budgeting can be a continuing issue, particularly in long-term partnerships. Often, as in two of the partnerships studied, the initial budget proposed by employers serves as a guideline, which is modified during the planning process based on factors such as fixed costs for courses, space and location needs, faculty availability, added materials and costs. Budgets are also renegotiated as training is extended.
- **Manage operations.** In general, colleges are responsible for day-to-day program administration to assure that classes and other services run smoothly. Larger partnerships tend to appoint a coordinator, full- or part-time, who can serve as a single point of contact with participants, employer and college administration. In some of the partnerships studied, the coordinator is also responsible for monitoring attendance and performance and producing regular outcome information. With partnerships such as Intel, though the coordinator is a college employee, the position is based on site at the employer and reports to a joint advisory council comprised of both employer and college staff.

This interactive partnership model requires an even greater commitment of time on the part of the community college. College staff in one of the larger partnerships report that they spent nearly 100 percent of their time on the planning portion of the program and 30 to 40 percent during implementation. Larger partnerships may also require separate day-to-day management. Two of the colleges, Mission and Macomb, have hired coordinators to administer the program. At Mission, the coordinator serves as a full-time contact, manages scheduling, serves as a liaison between participants, college and employer, and collects data on program outcomes. The Mission coordinator is a full-time position, while at Macomb a half-time coordinator is assigned to program operations.

Curriculum and delivery

Developing and delivering curriculum is at the heart of any training partnership, and presents two critical challenges to training providers. First, how can a partnership translate the sometimes vague objectives contained in an RFP to a concrete course or series of classes? Second, once developed, what is the best way to deliver the curriculum so employees learn?

These larger tasks in return raise a number of practical concerns: To what degree should training be customized? What is the respective role of college and employer? Should training be delivered on-site or at the college? Should it be classroom or individualized? Should it be after hours or during the work day?

Clearly, the answers to these questions depend on the particular context—the employer's and college's needs, capacity and resources. Yet the experience of these very diverse training initiatives suggests that successful development and delivery of training depends primarily on the ability of community college providers to perform four critical tasks:

- Draw on a strong foundation of existing curriculum and faculty expertise;
- Contextualize and relate curriculum directly to the company environment and needs;
- Deliver the curriculum at a time and place that best meet worker needs; and
- Teach the curriculum in a way that fits company culture and accounts for employee learning styles and skill levels.

Although these seem to be obvious thresholds, they are in practice sometimes difficult to meet. The experience of these partnerships suggests that in some ways, community colleges are among the training providers best suited to the task. Comprehensive and diverse, the best of these institutions combine the academic capacity required by more extensive training designs with the flexibility to deliver training customized to company needs. Yet community colleges also are institutions with their own traditions, style and culture. Meshing these with

the corporate environment—a base requirement of any successful training—is often a struggle even for the most successful of partnerships.

Developing curriculum

Building on a strong foundation

In developing a curriculum, the first step is to look at the academic foundation already present—the existing college courses and the pool of faculty expertise. Each of these colleges was able to draw on current resources to adopt or develop the training requested. This foundation is central to the creation of an effective training program.

All the courses requested by Intel for example—both general and technical—are part of the Mission curriculum and offered on a regular basis to other students. LaGuardia, too, has previously offered its management curriculum to other employers and needed only to adopt it for Sequins.

Where courses did not exist, community college partners had the capacity to develop them. Macomb did not offer most of the courses required by Chrysler, and needed to design much of the 69-course curriculum "from the ground up." It is striking, however, that this task, requiring six months of intensive planning and continuing curriculum development to complete the training design, was not seen as particularly taxing by college administrators. Macomb had access to a pool of faculty familiar with the general subject matter and has been able to create the needed courses, through drawing on faculty expertise and a related library of classes. In fact, the largest concern for Macomb administrators involved in the project has not been in curriculum development but logistics—scheduling the faculty to deliver classes at the time required.

Shoreline, too, was able to find an instructor with the requisite expertise to develop the Smart CAM training program. Like the other colleges, Shoreline has been able also to draw upon a strong foundation of related training.

For employers seeking college partners, this depth of expertise and prior experience should be viewed as a necessary prerequisite in provider selection.

Adapting curriculum design

The experience of these partnerships suggests that effective training requires colleges to adapt pre-existing curriculum to meet specific training requirements. Many employers expect colleges to study their training needs and worker abilities and create customized training accordingly. Colleges, too, recognize the need to ensure that programs are fully responsive to the company's training needs, and perhaps more importantly, that they use the company's business and product as an integral part of the training offered.

An important element in the success of the training programs studied has been this flexibility in curriculum design—the willingness and ability of selected community

colleges to adopt, refine and in some cases create curriculum and course material that mirror the workplace.

Each of the colleges has worked to create training that makes this kind of concrete connection with work. Once the training-award decision was made, colleges began the process of developing a customized training program. Typically, the first step was a fact-finding process that included visits and meetings with company staff and potential trainees to determine training needs.

Macomb, for example, sent instructors to the plant to observe tasks and interview supervisors. Instructors then developed a prototype curriculum and brought it back to the advisory group for review. Shoreline, too, began the process with a needs analysis that involved "lots of dialogue" with Boeing supervisors and training staff, while Mission drew upon the expertise and experience of the advisory council for input. At Mission, as at Macomb, the advisory group has served both as a forum and review board for curriculum decisions, a process that included frequent meetings and resulted in continuing program modification.

LaGuardia's Quality Management Training program has been adapted from previous training provided by the college to other manufacturers to suit Sequins' operation. LaGuardia had spent 10 months developing the basic quality management model that has now been used by the college at 14 companies (seven manufacturing firms and seven service firms). Sequin's director of human resources has served as the in-house point person for the program and has worked with the LaGuardia consultant and the project advisory group to customize the existing curriculum.

All the colleges studied view the task of taking a standard curriculum and adopting it to the specific needs of the companies as a fundamental part of a successful training program. As one Mission administrator commented: "If there is any way you can contextualize…do."

Each of the partnerships followed this mandate, looking for ways to bring business into the classroom. Mission asked its instructors to gear presentations to semiconductor manufacturing if possible, and to relate class discussions to the work assignments of classroom participants. The real life environment at Intel has been used as a focus of classes from English to physics, with homework specific to the industry and problems and paperwork drawn from the jobs of students.

At Macomb, where classes were developed specifically to meet Chrysler requirements, contextualization began with basic curriculum planning; each class was designed to conform to the framework set by Chrysler. Because workers are being trained for new Chrysler job classifications, tasks are immediately relevant to jobs. Classes are built around defined competencies that are measured at the completion of training.

At Shoreline, too, training, by contract, has been designed to connect to Boeing's manufacturing needs. Classes are built around the computer software employed by Boeing, and Boeing blueprints and parts are integrated into classes. Class design is based on achievement of defined competencies as at Chrysler. Shoreline has also trained a Boeing employee who is responsible for continued employee training upon completion of the project.

Delivering curriculum

After creating a curriculum, partnerships must find a way to deliver it that fits the company's schedule, capacity and needs, and resonates with the trainees. The first of these tasks—fitting the company's needs—occurs in the planning period; the second and harder task—teaching effectively—occurs in implementation.

Meeting employer time and place needs: wherever, whatever

All training programs must deal early on with the question of where training should be delivered—on campus or at the workplace; and whether it should be conducted during or after the normal working day. Considerations include the number of employees to be targeted; the kind of training to be offered, the duration of the training, whether training is voluntary or mandatory, and the capacity of the company training site and community college.

Three of the companies studied—Boeing, Intel and Sequins—chose to provide training on-site. This training is more convenient for employees and does not disrupt the overall operation of the plant. Chrysler, by contrast, with the largest scale training, chose the community college as the training site.

At Boeing, Chrysler and Sequins training is part of the working day. It is required and workers are learning a specific task or tasks that they immediately put to use. At Intel, by contrast, training is after work. Intel training is voluntary and unpaid, and focuses more generally on individual career advancement rather than work-specific training.

Regardless of the decisions made, it is clear that the ability to adopt training to company time and place needs is a third key element of successful partnerships. Flexibility of time and place is described by employers as one of the most critical elements—initially—in making the decision to work with a training provider, as well as in subsequent planning and operation. The community colleges, too, value and sell their ability to deliver "wherever, whenever" training, seeing their ability to take training elsewhere as an important part of the package they offer employers.

For community colleges suffering the common predicament of space limitations, providing off-site training is also a vital part of any business plan. The college's chief assets—curriculum, faculty and credit—are all more or less portable; selling them off

campus can add significantly to revenue and capacity without imposing greatly added costs. For this reason, several of the community colleges studied see this as an area of great potential and are actively moving to market this capacity.

For all these reasons, flexibility in service provision and the ability to meet employer requirements is an important part of all the training programs studied. Each of these initiatives require community colleges to adapt or change traditional class structures and faculty schedules to meet the needs of participating companies. Three of the partnerships require community colleges to deliver services at the workplace, while all four require adaptation to the shift patterns of the workers served.

For Boeing, the need has been to train all workers who need Smart CAM during their regular working shift on-site at the factory. This has required Shoreline to offer its one-week training during all three shifts, though most classes have been scheduled for the first and second shifts. Shoreline has reported little difficulty in maintaining this schedule.

Although Intel is located only a short distance from Mission College, the company's goal has been to establish a college on-site that could provide most of the general requirements for an AA degree, and could offer these classes at a time convenient for workers. Based on the work of the planning committee, Mission agreed to offer classes on-site at Intel, after the close of the working day. Most classes begin at 5:00 or 5:30 and are, unlike other programs, voluntary; workers are not paid for attendance. Mission has been able to offer most of the classes required by Intel at the Intel site, although some lab courses and other classes requiring special equipment are provided at the nearby Mission campus.

Chrysler training, located on the Macomb campus, posed a different kind of challenge than did the other programs. Rather than adapting to a company worksite, Macomb has had to adapt its own campus to Chrysler's large-scale training need. Macomb's training plan put some strain on the college, particularly in finding and retaining appropriate faculty who would teach the designated classes during the designated times. This kind of flexibility, however, is necessary to meet the demands of large-scale corporate training.

All Sequins training is provided on-site, during the working day. Individual training in areas like ESL is offered at the LaGuardia campus.

Matching faculty and company cultures

Developing curriculum and program delivery that satisfies employers has been at times a difficult challenge, but one that falls well within the capacity of these community colleges. A harder issue, however, is teaching the curriculum in a way that engages and benefits trainees, and that fits the prevailing company culture.

One concern facing training providers is the need to ensure that all students meet the academic requirements of the classroom; i.e., that they have the basic reading, math and computer skills to succeed in the training proposed.

Partnerships studied here have recognized the skills issue and have responded by asking instructors to gear training to prevailing skills levels, and by providing individual remedial instruction when needed. At Mission and Macomb, for example, students can receive individual tutoring and counseling, while at Laguardia they can be referred to ESL training. Shoreline requires that students have some familiarization with PCs prior to enrollment in training.

A second concern is to ensure that teaching conforms to the culture of both the company and its workers. As staff from several of the colleges noted, many of the trainees, who are long-time employees, have absorbed the attitudes and style of their workplace. To some extent, this means instructors can face a classroom of students who share a way of learning and responding that can be very different from those in the average diverse community college class. Lack of familiarity or comfort with these kinds of corporate cultures can create conflicts in a classroom where faculty are used to setting the tone and teaching environment.

Adapting teaching to company culture in the classroom has been a difficult issue for several of the partnerships, and is an important factor to consider in developing training relationships between community colleges—or any outside provider—and companies with a strongly established working culture. This is particularly true in companies where workers to be trained are less educated, have been employed for a long time, have received most of their training through internal sources, and have not developed a pattern of continuing education. To some extent, these conditions apply at all the partnerships studied and, of course, at many industrial concerns throughout the country.

At two of the partnerships, Intel/Mission and Chrysler/Macomb, conflicts emerged between one or two instructors and trainees. Although the environment is very different at the two firms, the cause—the perception that instructors did not understand or respect the company culture—has been the same.

The Intel training program presents an interesting study in contrasts. Although workers are burdened with low basic skills, they are also, by virtue of long service at one of the world's most successful companies, well paid, often wealthy individuals, with significant professional responsibilities. Moreover, Intel students are part of an aggressive company that encourages what one Mission staffer calls "constructive confrontation." Facing a room that includes sometimes aggressive and challenging students, have been some community college instructors who—both partners agree—are not necessarily ready for such a competitive environment. The result has been occasional

classroom clashes and the belief on the part of some students that some instructors did not treat them like professionals. Intel ultimately asked to pull two instructors, while Mission recognized that instructors who "pushed back" were more effective with students.

At Chrysler, a different situation prevailed. There, during initial training, Macomb community college instructors, teaching an older workforce with an average of 27 years of seniority and job security, had to find a way to motivate trainees in making a difficult change in their working lives. Given this challenge, Chrysler employer and union representatives feel strongly that in order to teach effectively, instructors need to have a background in the industry and an understanding of the labor force. In practice there have been complaints that some of the instructors did not relate well to the trainees and that the teaching style employed by one or two instructors is "too directive" for the trainee group. As a result, these instructors were taken off the training project. As with Mission, Macomb has recognized the importance of grounding instructors in the industry and corporate culture to as great a degree as possible, through prior experience or intensive orientation.

It is significant that the question of how faculty can effectively relate to corporate culture arises even at institutions that are among the more notable nationally in developing successful partnerships with business. The gulf between academic and corporate culture is often a wide one, difficult to bridge even for experienced faculty and college administrators. In developing a partnership, college administrators, even at leading institutions, face the inherent challenge that a great majority of their instructors will not be steeped in the ways of their partner's businesses. This, combined with issues of availability and competence in the needed subject areas, highlights the need for professional development and planning as well as occasional on-the-job training.

Budget

Among the most important questions for employers entering a training partnership are those that relate to the cost of training. What are actual costs? How negotiable are costs? Are there opportunities for public grants or discretionary funds? What about tax benefits? In working with community colleges, additional questions are naturally raised: Are community colleges competitive with other providers? Is there a potential for college aid or other public subsidies that might not otherwise be available?

Unlike the other key components of training discussed here, there is no clear-cut distinction between community colleges and other training providers, at least as seen in the partnerships studied here. There are also no firm guidelines for employers to follow, beyond the basics of good negotiating and seeking whatever accommodation is available. If any lesson does emerge it is that colleges will be most flexible on price in delivering the kind of short-term, no-credit training also offered by other providers. Where colleges offer a unique service-credit, intensive or comprehensive training, award of academic certificates, or continuing training, costs are more likely to be fixed.

All the companies studied here paid all or most of the training costs, either directly or through the participation of union training funds. While some of the partnerships have been able to attract some public subsidies, others have not. Moreover, the subsidies gained are not necessarily related to the community college connection.

Similarly, there is no common experience with costs as compared with those of other training providers. Two of the partnerships profiled here are seen by employers as cheaper and more flexible than other kinds of training providers. Two others are seen as providing unique services that other providers could not match, but are also seen as largely inflexible in costs.

Training costs naturally varied with the scope and intensity of training offered. The 88-hour quality management training at LaGuardia cost $11,000 per semester ($22,000 per year) for the 250 participants,

with eight semesters of training conducted to date. Shoreline's Smart CAM training, priced at $40,000 for training 70 students in one-week classes in its initial phase—the same price structure remains in place—has trained 250 workers.

From here, costs rise considerably. The Intel community college training at Mission costs approximately $200,000 for the 100 to 150 students served at any given time, while the extensive Chrysler training at Macomb was initially budgeted at $3 million for 350 students.

Budgets at three of the partnerships—all new training designs—were developed through a process of negotiation between the employer and college, while the fourth, LaGuardia's quality training, is fixed-price based on similar training LaGuardia has offered at other companies. Interestingly, employer partners have found that the two lower-cost training projects—those operated by Shoreline and LaGuardia—which both offer training that is available elsewhere, are cheaper when offered by the community college than by other providers, or when provided internally.

Boeing, for example, has found that the Shoreline cost of training—$16/hour for each trainee—is far less than the $40/hour budgeted for internal training. The management consulting assistance provided to Sequins by LaGuardia includes both in-depth analysis and continuing, hands-on strategic assistance for $22,000 per year. A major consulting firm offered Sequins a somewhat more comprehensive assessment service with no additional training for $95,000—more than four times as much.

These same cost benefits do not hold true in the larger and more unique training models. At Intel, Mission College is tied to a state-established cost structure for any courses for which credit is awarded. This has limited cost flexibility and the ability to reduce expenses as the program evolves. This in turn has caused the Mission partnership to be an exception among Intel subcontractors, who typically are required to reduce costs from year to year. The issue of fixed fee structures tied to credit extends beyond the Intel partnership to other states; in Washington for example, Shoreline and Boeing ultimately decided not to provide credit for Boeing students since it would raise training costs. At Macomb, where Chrysler training imposed a significant burden both in faculty time and overall capacity, the budget has been developed on a cost-plus basis.

An important question for any employer to consider is the potential for community college help in subsidizing training costs. In a number of states, public subsidies available to community colleges working with employers can pay for curriculum development and instructional costs, and even provide cash to companies in the form of wage subsidies or direct cost reimbursement. Other resources, such as foundation funding, also sometimes support community college/employer partnerships. The Alfred Sloan Foundation, for example, supports

LaGuardia's work with manufacturers, and provides opportunities for workers to receive additional management-related training, conference fees and other services.

With the exception of the LaGuardia program, however, community college subsidies have played a relatively small role in these partnerships, with Macomb drawing down some state funding to assist in curriculum development. Other colleges that have explored state funding report that funding options do not fit, for one reason or another, the design of the training program.

Potentially at least, the availability of subsidies for community college directed training does provide a clear opportunity for employers that is not available when working with other training providers. However, employers also need to consider that these subsidies may carry restrictions with them, such as the need to serve low-income workers or to link subsidized training for current employees with guarantees to hire entry-level workers.

Assessing Partnerships

Any look at larger lessons offered by community college partnerships should begin with an assessment of the training conducted in these four initiatives. After three years of training, how do the employers studied view their partnerships? Are they seen as effective? Did they lead to measurable improvements? What are the benefits—and costs—relative to other kinds of training? Do companies plan to expand training? What are the lessons for other employers?

Outcomes

All of the companies interviewed believe that training to date has been a success. By and large, the measures they used have not been global ones, such as improved productivity or market share, difficult to measure or attribute in the context of industry leaders like Intel, Boeing and Chrysler. Rather, the focus has been more immediate, particularly on measures like successful completion of training provided. In all cases this has been high. This relatively short-term view of training impact may also reflect the fact that these programs are continuing.

At Intel, the company estimates that 80 to 87 percent of enrolled students complete individual courses. The college's minimum standard of academic progress requires students to maintain a grade point average of 2.0 and complete 50 percent of the overall credits in which the student has enrolled. The larger impact of training on degrees earned—the ultimate goal of the Intel program—has not been assessed due to varying progress rates and the relatively long time needed to complete all requirements. Intel initially sought to get grade reports as a measure of progress, but this was turned down by Mission as violating student confidentiality. Intel reports it has done no internal competency assessments beyond course completion.

At Chrysler, success is measured through pre- and post-tests, based on the defined competencies to be delivered in classes. Classes are tested as a group, with success defined as all members achieving competencies. For the first 350 workers through the program, the partnership rates 99.7 percent of trainees as completing Level 1—the basic level of skills upgrade—and "99

percent plus" as completing the more advanced Level 2. Chrysler has deliberately avoided any individual testing of trainees either in basic skills capability or achievement of desired competencies, preferring to focus on results by training class.

Shoreline's program, also designed to aid participants in meeting defined competencies, has a similarly high success rate for the 250 employees who have entered training, with only a few failing to complete the required coursework. Again, training success is measured by Boeing in terms of this completion rate, rather than any larger impact.

Sequins, by far the smallest employer studied, expects the most ambitious outcomes from its program, believing that company-wide management training will improve productivity and decrease costs. Although all 250 of its workers are now participating in the four-year-old training program, quantifiable results have been limited due to a longer than expected information-gathering process. Sequins expects to have a new information management system in place by the end of 1999. The full impact of the LaGuardia training cannot be realized until these data are available.

More telling perhaps than individual outcomes has been the decision of all the companies participating either to continue training or to enter into new training agreements with community colleges. This decision does not reflect any single advantage offered by these community colleges over other training providers, but rather the fact that the colleges studied here have been able to bring together a number of training advantages in one place. If there is one theme underlying all these partnerships, it is that all the community colleges studied here have been able to combine attributes such as expertise, capacity and credit-bearing courses in a well-established and easily accessible institution. This has created, for these companies, a training environment that few other providers can duplicate.

Lessons

These four partnerships are in their way exemplary, representing a successful match between training need and provider. The community colleges, too, are not representative of all community colleges, nor may other employers have the same training opportunity afforded to Boeing, Intel, Chrysler and Sequins. For employers nationally, it is important to recognize that many community colleges focus more on academic than vocational preparation, and that others are struggling to define their mission in a rapidly changing educational and economic environment.

Nevertheless, we believe that these examples fairly represent the potential of these institutions as training providers, and that the issues raised here are reflective of those likely to arise in partnerships established between employers and colleges. The experience of these partnerships offers a number of lessons employers may want to consider as they seek to meet their own training needs, and to plan, structure and operate programs.

Selecting a Provider

Community colleges can be well-positioned to meet critical training needs in today's economy.

The first lesson these partnerships offer the larger community of employers is that some community colleges are especially well-suited to meet the diversity of training needs likely to be faced by manufacturing employers in a competitive environment. As advancing technology increases the need for continuing education and training, community colleges are among the training providers best positioned to meet training requirements like:

- A continuing connection to an educational institution;
- Large-scale, complex and/or long-term training;
- Accreditation for training or receipt of a postsecondary degree; and
- Ancillary services such as counseling and evaluation.

Among the community of training providers, community colleges have a clear advantage in meeting the training requirements and challenges raised by large employers like Intel and Chrysler. For example, few other training entities can offer, in one place, degrees and transferable credits to other institutions (important to Intel and of interest to Boeing); the capacity to mobilize faculty; established curriculum to train in multiple subject areas (necessary for both Chrysler and Intel); and the potential to offer continuing training and education extending beyond the initial training plan (a virtue for all the companies studied).

With the ability to hire part-time instructors and take advantage of existing faculty, community colleges may also offer cost advantages in smaller and less demanding training programs that do not require a large educational infrastructure.

Employers should seek community colleges that combine capacity, area expertise and flexibility.

Not all community colleges in a region will be able to meet employer training requirements. While, clearly, the appropriate institutional choice will depend on a great variety of factors, the experience of these diverse training partnerships still suggests a core list of characteristics that employers should consider in any selection process including:

- Established curriculum and courses in the training field;
- A pool of experienced and available faculty;
- Training delivery flexible enough to meet employer time and place requirements;
- Capacity to deliver training on-campus if needed;
- Willingness to engage in an intensive curriculum development process;
- Willingness to adapt curriculum to meet employer needs;
- Willingness to devote extensive staff time to management and operation; and
- Willingness to seek outside funding to help support training.

In larger partnerships particularly, companies should familiarize providers with training needs through meetings prior to selection. Companies should also be prepared for extensive early planning to refine objectives, structure and costs.

Realizing the advantages of community college training can also mean additional costs and program burdens.

The experience of these partnerships shows that the advantages often sought by employers in choosing community colleges as providers are not always realized. These advantages can also carry additional costs and program requirements.

Credit has been cited by several of these employers as a reason to consider community colleges. Pursuing accreditation, however, raises training costs and may delay program implementation. As described earlier, state cost frameworks and requirements for credit-bearing courses can result in higher costs than noncredit training, as well as limiting flexibility in negotiating price. Creating new courses to meet company needs can require time-consuming faculty approval and may also impose individual testing requirements that companies may wish to avoid.

Similarly, employers cite the potential of community colleges to offer life-long learning for their employees. Community colleges do provide these opportunities, but the link with training programs is not automatic. Ensuring a continuing connection to community colleges requires that companies commit themselves to programs through efforts like individual education, planning and counseling. Although training is continuing, it is not clear that students in these partnerships have taken full advantage of continuing educational opportunities offered by the community colleges.

Structuring Training Relationships

Employers and community colleges need to take clearly defined roles.

Partners need to decide early on how roles will be divided, and maintain a clear set of responsibilities throughout the training program. While this will likely vary depending on the nature of training and many other factors, the experience of the partners studied suggests that employers should take on a management and review role, and leave planning and operational responsibilities to colleges.

Specifically, employers should focus on areas including:

- Setting objectives;
- Internal management;
- Setting budget parameters;
- Reviewing program organization and design;
- Recruitment and internal operations; and
- Monitoring.

Community colleges should focus on areas including:

- Curriculum development;
- Faculty selection;
- Scheduling and logistics;
- Training design;
- Day-to-day operation; and
- Outcomes and evaluation.

Partnerships should be managed jointly.
As partnerships evolve, it is a near certainty that tensions will arise between employer and training provider, that initial program plans will be modified and that unexpected developments will require changes and quick decisions. All partners agree that in the larger partnerships especially, the formal division of responsibilities underlying training structure should be accompanied by a joint college-employer group to serve as a vehicle for overall management, to review key decisions, modify program design and operation, and monitor program results. This group should include employer, union (if appropriate) and college representatives. The advisory group should meet regularly during planning stages and periodically during the operational phase.

Larger partnerships require a full-time administrator.
Even with an extensive commitment of time by higher level employer and college representatives, large training programs, such as those sponsored by Boeing and Intel, need a full-time administrator who can serve as a single point of contact for program participants, employer and college.

Developing and delivering curriculum

Partnerships should incorporate extensive curriculum planning.
One of the strongest lessons to emerge from discussions with college administrators is the need to determine employer needs and wants. Even where community colleges have a strong pre-existing curriculum base, program curriculum development should begin with an extensive preparation period—lasting several months or longer in larger or more complex training designs—when college staff meet with supervisors and workers, visit the workplace, observe tasks and needs, and review preliminary designs with employers.

Curriculum should reflect the workplace.
College administrators agree that training programs are most effective when they connect in a concrete way with the workplace. As part of the development process, instructors should seek, to the greatest degree possible, to incorporate real-life work context, practices and products as an integral part of classroom learning.

Program delivery and teaching should reflect the workplace.
Different workplaces reflect different cultures and ways of learning. Just as curriculum needs to incorporate the real-life workplace, so does the way in which the curriculum is conveyed. Some administrators feel that instructors should share experience or background with workers being trained, particularly in cases where long-time older workers are being asked to

develop new skills. In any case, all agreed that selected instructors must understand and feel comfortable with workplace culture and practices so as to teach in a way that resonates with trainees. This suggests that instructors become familiar with corporate culture prior to the beginning of training through workplace visits and meeting with corporate staff. As the experience of even this very limited sample shows, this can also mean encouraging very different classroom styles—ranging from supportive to challenging—depending on the workers to be trained.

Program delivery should fit with time and place needs of the employer and workers. Effective training should fit as well as possible into trainee schedules, reflecting employer rather than college needs. Partnerships should explore options that include providing training at the worksite, scheduling training to fit pre-existing worker schedules (including all shifts), surveying workers as to best available training times, and delivering training in small groups.

Partnerships should incorporate supportive services. Trainees may require a variety of services outside formal classroom training. Partnerships should incorporate individual tutoring for employees below the basic skills threshold established for classroom training. This availability is particularly important for employers reluctant to individually test basic skills prior to start of training. To meet employer objectives of expanding a worker's access to the education beyond formal training, partnerships should incorporate a career and educational counseling component.

Budgeting

Community colleges should explore public grant resources to help support partnership efforts. In a number of states, funds available solely or primarily to community colleges can help support curriculum development and training efforts. While these resources may carry restrictions that make them impractical or irrelevant to employer needs, consideration of these opportunities should be part of the budget process. Community colleges should also work to familiarize employers with other resources that might be available, including state and community economic development funds, and—where appropriate—should serve as a co-applicant for these dollars.

Conclusion

The experience of these training programs reflects both the importance of partnerships between employers and training institutions such as community colleges and the difficulties inherent in making them work.

The pace of economic and technological change has increasingly driven firms, large and small, to become consumers of training, often provided by outside entities. Accustomed to setting high thresholds for other suppliers, companies are proving to be demanding and influential consumers in the training marketplace as well.

To succeed, the ideal training provider must be able to offer a great deal: in-depth training across a wide range of skills and knowledge; services delivered anytime and anywhere; continuing presence and accessibility; and competitive price.

As we have seen, few, if any, training providers can meet all these conditions. Yet, as publicly supported local institutions, community colleges have the inherent advantages of accessibility, capacity, continuity and scope that few other trainers—private, nonprofit or public—can match.

Employers should not expect that any or every community college can deliver on this promise. Many community colleges have an academic mission, rejecting or minimizing a vocational role. Others have failed to develop the depth and breadth of training services that can meet the needs of industries where technology changes weekly. Still others have yet to develop the market perspective and flexibility to meet the changing and often complex requirements of corporate consumers.

One of the strongest, if least surprising, lessons here is that a successful partnership depends on the ability of the college—in many ways a traditional educational institution—to act in a nontraditional way. All the colleges profiled here view their role less as institutions than as corporate partners, with curriculum, staffing and delivery treated as flexible and negotiable services, rather than fixed features. This kind of negotiation and flexibility, is, of course, less of a

departure for the corporate partners, used to working with suppliers to get the services they need. Yet, business partners must consciously maintain flexibility in working with community colleges, recognizing that they, as large public entities, do have restrictions that other service providers do not.

An equally powerful lesson is that the right perspective is only the start. Each of these partnerships—and they are among the best—featured a long and at times difficult negotiation process requiring a strong commitment from both partners. Even with this kind of accommodation, barriers, like those of reconciling community college and corporate cultures, will likely arise despite good will and strong effort.

Accepting these difficulties and caveats, inevitable in any kind of partnership, the experience of these four programs shows that for employers seeking to develop and retain a competitive workforce, community colleges can be an important—and perhaps necessary—resource.

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P/PV

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Working Ventures

Working Ventures seeks to improve the performance of the workforce development field by providing practitioners and policymakers with the knowledge and tools needed to operate effective employment programs. We support the field by documenting effective employment strategies and practices, convening practitioner workshops and providing resources to encourage program innovation.

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